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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,895	07/24/2003	Toshiya Uemura	PTGF-03043 HIR.072	1190
21254	7590	05/17/2005	EXAMINER	
MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			NADAV, ORI	
			ART UNIT	PAPER NUMBER
			2811	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,895

Applicant(s)

UEMURA, TOSHIYA

Examiner

ori nadav

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 20-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 20-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 20-31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support in the embodiment of figures 1-3 for a phosphor layer aligned with (over) said light passing hole, as recited in claims 20 and 23.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 and 20-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claimed limitation of a nitride semiconductor, as recited in claim 1, is unclear as to which material is nitride semiconductor.

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The claimed limitations of a first reflector comprising a concave shape for converging light emitted from a light emitting element mounted on a first surface of a plate facing said first reflector onto a predetermined position on the first surface of said plate, as recited in claim 20, are unclear as to which element is mounted on a first surface of a plate.

The claimed limitations of a first reflector comprising a concave shape for converging light emitted from a light emitting element mounted on a first surface of a plate facing said first reflector onto a predetermined position on the first surface of said plate, and a light passing hole in said plate located at the predetermined position, as recited in claim 20, are unclear as to how an element and a hole can be located at the same position (predetermined position).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 20-31, insofar as in compliance with 35 U.S.C. 112, are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaskie et al. (5,698,941) in view of Kimura et al. (6,195,196) and Suehiro et al. (Jp 2001-217466).

Jaskie et al. teach in figure 16 and related text a light emitting apparatus, comprising:

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a light emitting element of semiconductor;

a phosphor 808, 810 that absorbs light emitted from said light emitting element and emits light with a wavelength different from that of the absorbed light;

a first reflection mirror 824 (the left mirror) that reflects the light emitted from said light emitting element to converge the light;

a second reflection mirror 824 that has a light passing hole (the hole between the second and third mirrors 824) at a position on which the light reflected on said first reflection mirror is converged and that has a reflection surface on the side opposite to the side facing said first reflection mirror; and

a phosphor layer 808, 810 that includes said phosphor, said phosphor layer being placed over said light passing hole (see figure 1, the device can be placed in the direction as depicted in figure 16, or in an opposite direction) and at a specific region that part of light passing through said light passing hole is radiated.

Jaskie et al. do not teach a light emitting element of nitride semiconductor and a phosphor layer being placed in transparent resin.

Kimura et al. teach a nitride semiconductor.

Suehiro et al. teach a phosphor layer being placed in transparent resin.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a light emitting element of nitride semiconductor and to place the phosphor layer in transparent resin in Kimura et al.'s device in order to simplify the processing steps of making the device by using conventional light emitting element and in order to protect the phosphor layer, respectively.

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Note that the broad recitation of the claim does not require the second reflection mirror to be located above the first reflection mirror.

Regarding claims 2-4, Kimura et al. teach a first reflection mirror has a ring-shaped concave (see figure 18) to converge the light and said light passing hole has a shape such that the light reflected on the ring-shaped concave is converged while having a ring shape, wherein

said phosphor layer has a thickness in the light emission direction, said thickness being capable of being adjusted according to the color of light to be extracted from said light emitting apparatus, and wherein

said phosphor layer includes said phosphor the concentration of which is capable of being adjusted according to the color of light to be extracted from said light emitting apparatus.

Response to Arguments

Applicant argues that nowhere do Jaskie et al. teach or suggest a second reflection mirror that has a reflection surface on the side opposite to the side facing said first reflection mirror so that any light reflected or dispersed away from the emission observation surface by the phosphor layer is reflected by the reflection surface back toward the emission observation surface. Rather, Jaskie et al. merely discloses a two reflective surfaces 824,830 in which light is reflected from reflective surface 824 toward

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surface 830. As such, in contrast to the present invention, the reflective surfaces in Jaskie et al. face or oppose each other.

Claim 1 recites a first reflection mirror that reflects the light emitted from said light emitting element to converge the light, and a second reflection mirror that has a light passing hole at a position on which the light reflected on said first reflection mirror is converged and that has a reflection surface on the side opposite to the side facing said first reflection mirror. Jaskie et al. teach a first reflection mirror 824 (the left mirror) that reflects the light emitted from said light emitting element to converge the light, and a second reflection mirror 824 (the right mirror) that has a light passing hole (the hole between the second and third mirrors 824) at a position on which the light reflected on said first reflection mirror is converged and that has a reflection surface on the side opposite to the side facing said first reflection mirror. The reflection surface of the second reflection mirror is on the side opposite to the side facing the first reflection mirror, because the left and right reflection mirrors do not face each other since reflection mirror 830 is located in between.

Furthermore, the limitations of a second reflection mirror that has a reflection surface on the side opposite to the side facing said first reflection mirror so that any light reflected or dispersed away from the emission observation surface by the phosphor layer is reflected by the reflection surface back toward the emission observation surface are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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Applicant argues that the reflective surfaces in Jaskie et al. do not converge the light, as in the claimed invention.

Jaskie et al. teach concave reflective surfaces. Concave surfaces, by nature, converge light, as opposed to diverse light. Therefore, Jaskie et al. teach converging the light, as claimed.

Applicant argues that that the direction as depicted in the figures can not be reversed, because Jaskie et al. explicitly teaches away from doing so by the fact that the light 816 travels in the direction shown in order to provide a display without caps. To reverse the direction in which the light flows in Jaskie et al. would result in a non-functioning display.

Claim 1 recites a phosphor layer being placed over a light passing hole. Figure 16 of Jaskie et al. depicts a phosphor layer 808, 810 being placed under a light passing hole. Figure 1 of Jaskie et al. depicts a phosphor layer 110 being placed over the entire device, and thus over the light passing hole. Therefore, it would be obvious to use a phosphor layer over said light passing hole in the device of figure 16 of Jaskie et al., as claimed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Papers related to this application may be submitted to Technology center (TC) 2800 by facsimile transmission. Papers should be faxed to TC 2800 via the TC 2800 Fax center located in Crystal Plaza 4, room 4-C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Group 2811 Fax Center number is (703) 308-7722 and 308-7724. The Group 2811 Fax Center is to be used only for papers related to Group 2811 applications.

Any inquiry concerning this communication or any earlier communication from the Examiner should be directed to *Examiner Nadav* whose telephone number is **(571) 272-**

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1660. The Examiner is in the Office generally between the hours of 7 AM to 4 PM
(Eastern Standard Time) Monday through Friday.

Any inquiry of a general nature or relating to the status of this application should be
directed to the **Technology Center Receptionists** whose telephone number is **308-
0956**



O.N.
5/12/05

ORI NADAV
PRIMARY EXAMINER
TECHNOLOGY CENTER 2800